US Department of Veterans Affairs

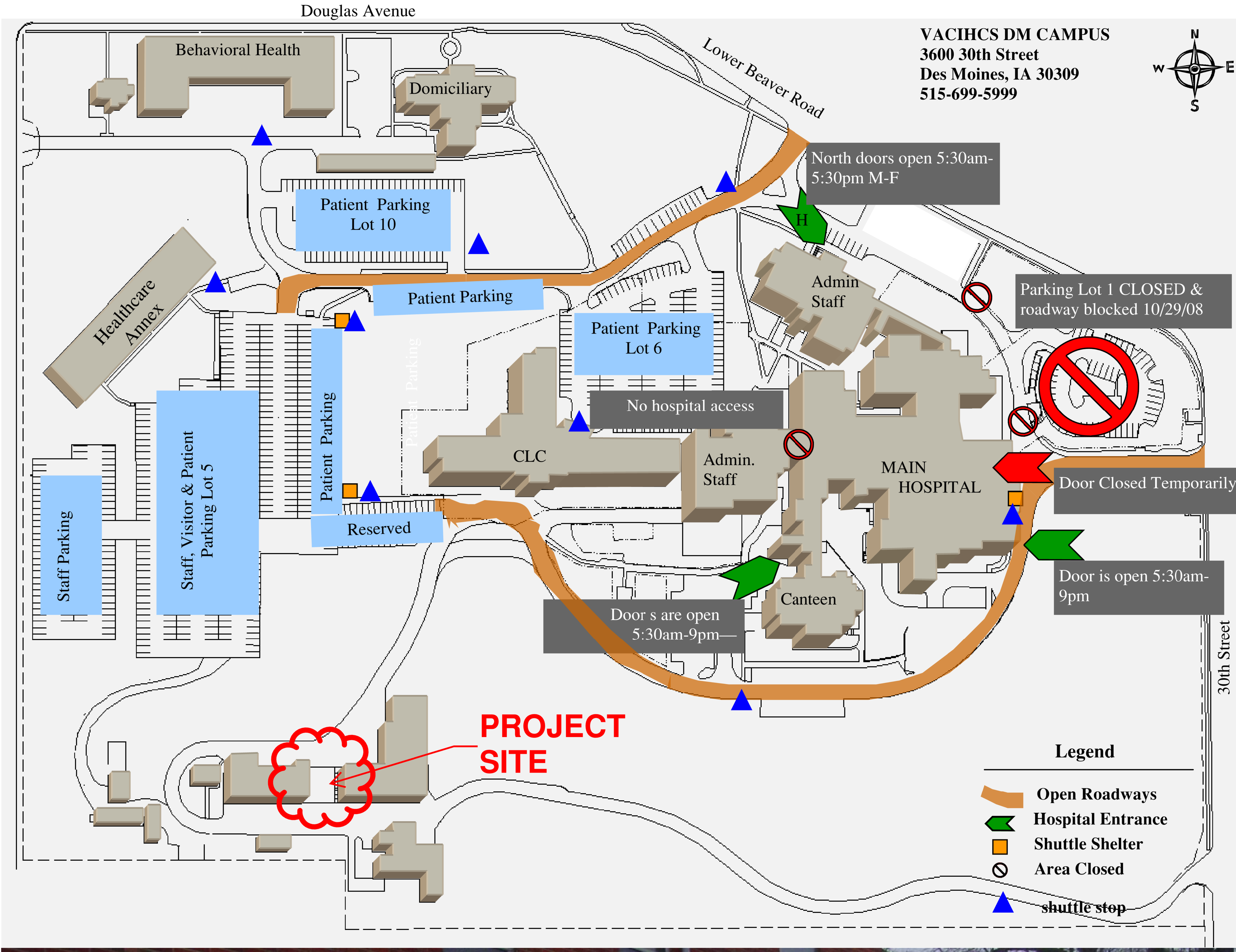
Program Contracting Activity Central (PCAC)
6150 Oak Tree Blvd, Suite 300
Independence, Ohio 44131

E85 FUELING STATION

VA Medical Center
3600 30th Street
Des Moines, Iowa 50310

IDIQ #VA701-12-D-0038

Task Order #VA701-13-J-0154



LIST OF DRAWINGS

08/01/2014

CONSTRUCTION BID DOCUMENTS

NO	REVISIONS	DATE

PROJECT TEAM

ARCHITECTURAL: MECHANICAL/ELECTRICAL/PLUMBING: STRUCTURAL: CIVIL / SURVEYOR: FIRE PROTECTION: COMMISSIONING AGENCY: ENVIRONMENTAL SERVICES:

ARCHITECTS/ENGINEERS

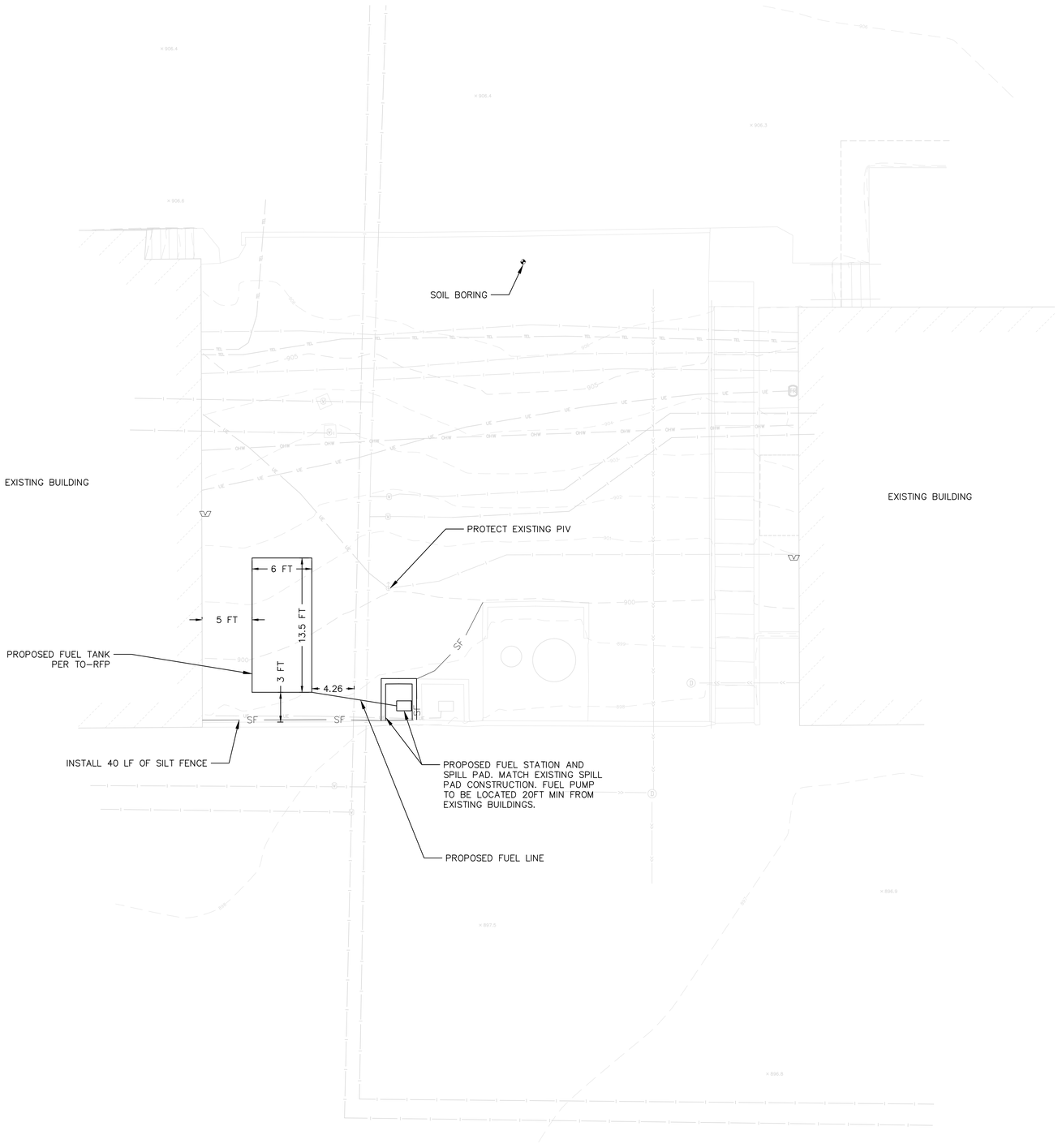
ANDERSON ENGINEERING

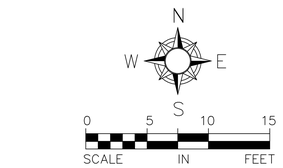
EMR

HDR
444 CEDAR STREET, SUITE 1900, ST. PAUL, MN 55101

Drawing Title	COVER SHEET
Approved: Project Director	
Project Title	E85 FUEL STATION
Location	3600 30TH STREET DES MOINES, IA 50310
Date	08/01/2014
Checked by	Checker
Drawn	Author
Project Number	222514
Building Number	
Drawing number	G-001

Office of Construction and Facilities Management



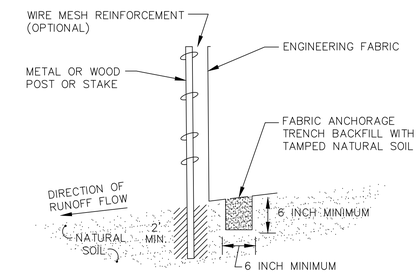


LEGEND

- SIGN
- POST INDICATOR VALVE
- SOIL BORING
- TR ELECTRIC BOX
- AUTO SPRINKLER
- AC AIR CONDITIONER
- CB CATCH BASIN
- HYDRANT
- D STORM MANHOLE
- W WATER VALVE
- OHW OVERHEAD WIRES
- >> STORM SEWER
- T TELEPHONE
- UE UNDERGROUND ELECTRIC
- I WATER MAIN

GENERAL NOTES:

1. FINAL GRADES SHALL MATCH EXISTING GRADING
2. EROSION CONTROL BLANKETS SHALL BE INSTALLED OVER ALL DISTURBED SOIL
3. ANY DISTURBED PAVEMENT SHALL BE REPLACED IN-KIND
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING UTILITY LOCATIONS.
5. NEW FUEL PUMP SHALL BE INSTALLED 20FT MIN AWAY FROM ALL BUILDINGS
6. PROTECT ALL EXISTING UTILITIES AND STRUCTURES (TYP)
7. SEE EXISTING CONDITIONS PLAN FOR ADDITIONAL UTILITY INFORMATION
8. CONTRACTOR TO VERIFY STOCK PILE LOCATION WITH RESIDENT ENGEINEER



NOTE: DEPENDING UPON CONFIGURATION, ATTACH FABRIC TO WIRE MESH WITH HOG RINGS, STEEL POSTS WITH TIE WIRES, OR WOOD POSTS WITH STAPLES.

TYPICAL INSTALLATION FOR SILT FENCE

CONSTRUCTION BID DOCUMENTS

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NO	REVISIONS	DATE

PROJECT TEAM

ARCHITECTURAL | MECHANICAL/ELECTRICAL/ PLUMBING | STRUCTURAL | CIVIL / SURVEYOR | FIRE PROTECTION | COMMISSIONING AGENCY | ENVIRONMENTAL SERVICES

ARCHITECTS/ENGINEERS

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ENGINEERING • ARCHITECTURE • LAND SURVEYING
ENVIRONMENTAL SERVICES • LANDSCAPE ARCHITECTURE

EMR NOVOMATERIS INFRASTRUCTURE AND ENVIRONMENT

HDR

444 CEDAR STREET, SUITE 1900,
ST. PAUL, MN 55101

Drawing Title: SITE PLAN

Approved : Project Director

Project Title: **E85 FUEL STATION**

Location: **3600 30TH STREET DES MOINES, IA 50310**

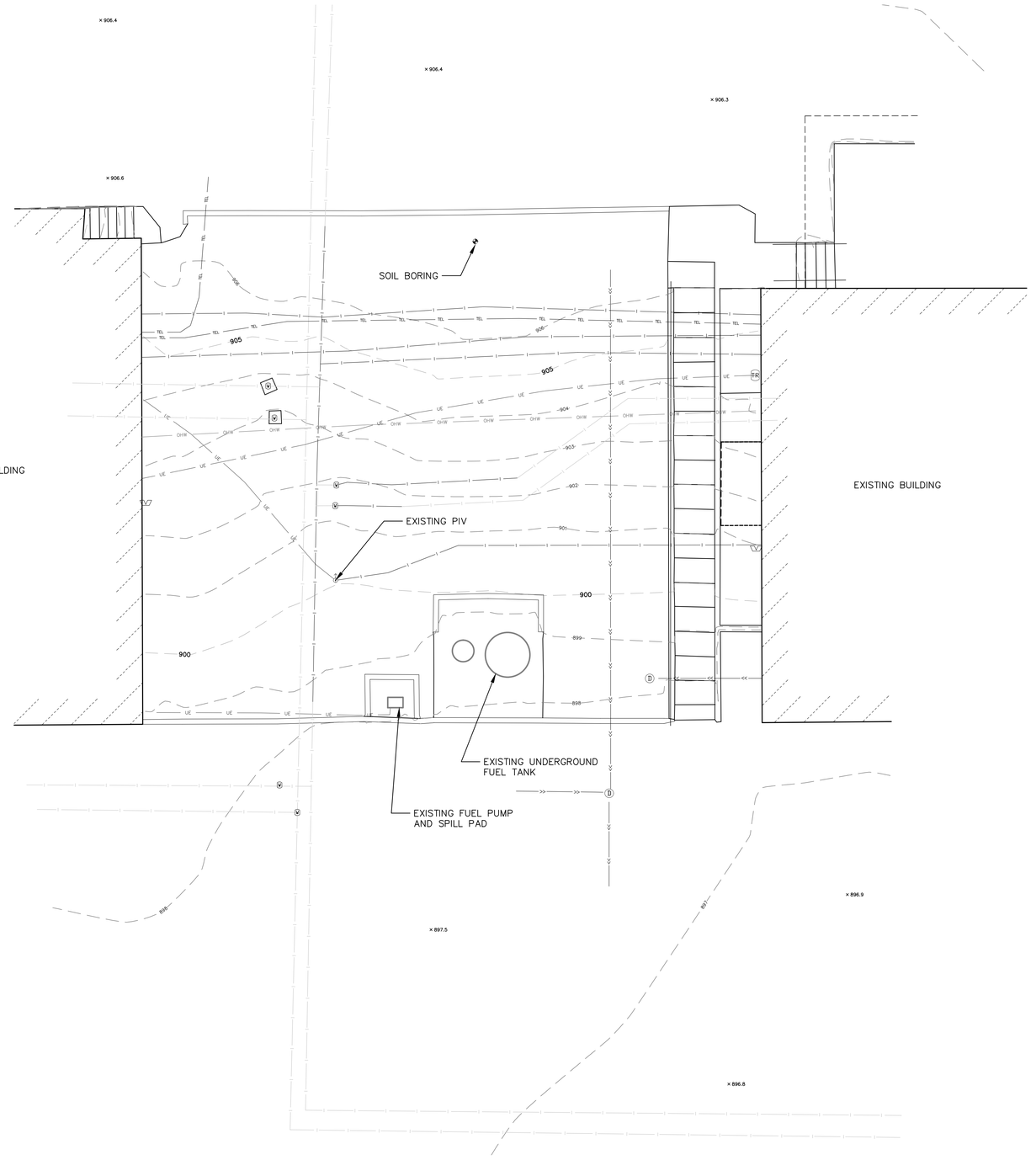
Date: **08/01/2014** | Checked by: **Checker** | Drawn: **Author**

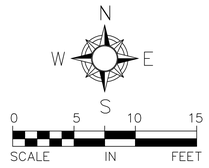
Project Number: **222514**

Building Number:

Drawing number: **CU-102**

Office of Construction and Facilities Management





LEGEND

- SIGN
- POST INDICATOR VALVE
- SOIL BORING
- ELECTRIC BOX
- AUTO SPRINKLER
- AIR CONDITIONER
- CATCH BASIN
- HYDRANT
- STORM MANHOLE
- WATER VALVE
- OHW — OVERHEAD WIRES
- >> — STORM SEWER
- T — TELEPHONE
- UE — UNDERGROUND ELECTRIC
- W — WATER MAIN (FIELD VERIFIED)
- W — WATER MAIN (PER UTILITY STUDY)

GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING UTILITY LOCATIONS.
2. PROTECT ALL EXISTING UTILITIES AND STRUCTURES (TYP)

CONSTRUCTION BID DOCUMENTS

three inches = one foot
one and one-half inch = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighth inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot

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NO	REVISIONS	DATE

PROJECT TEAM

ARCHITECTURAL: | MECHANICAL/ELECTRICAL/ PLUMBING: | STRUCTURAL: | CIVIL / SURVEYOR: | FIRE PROTECTION: | COMMISSIONING AGENCY: | ENVIRONMENTAL SERVICES:

ARCHITECTS/ENGINEERS

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EMR INCORPORATED
INFRASTRUCTURE AND ENVIRONMENT

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Drawing Title: EXISTING CONDITIONS

Approved : Project Director

Project Title: **E85 FUEL STATION**

Location: **3600 30TH STREET DES MOINES, IA 50310**

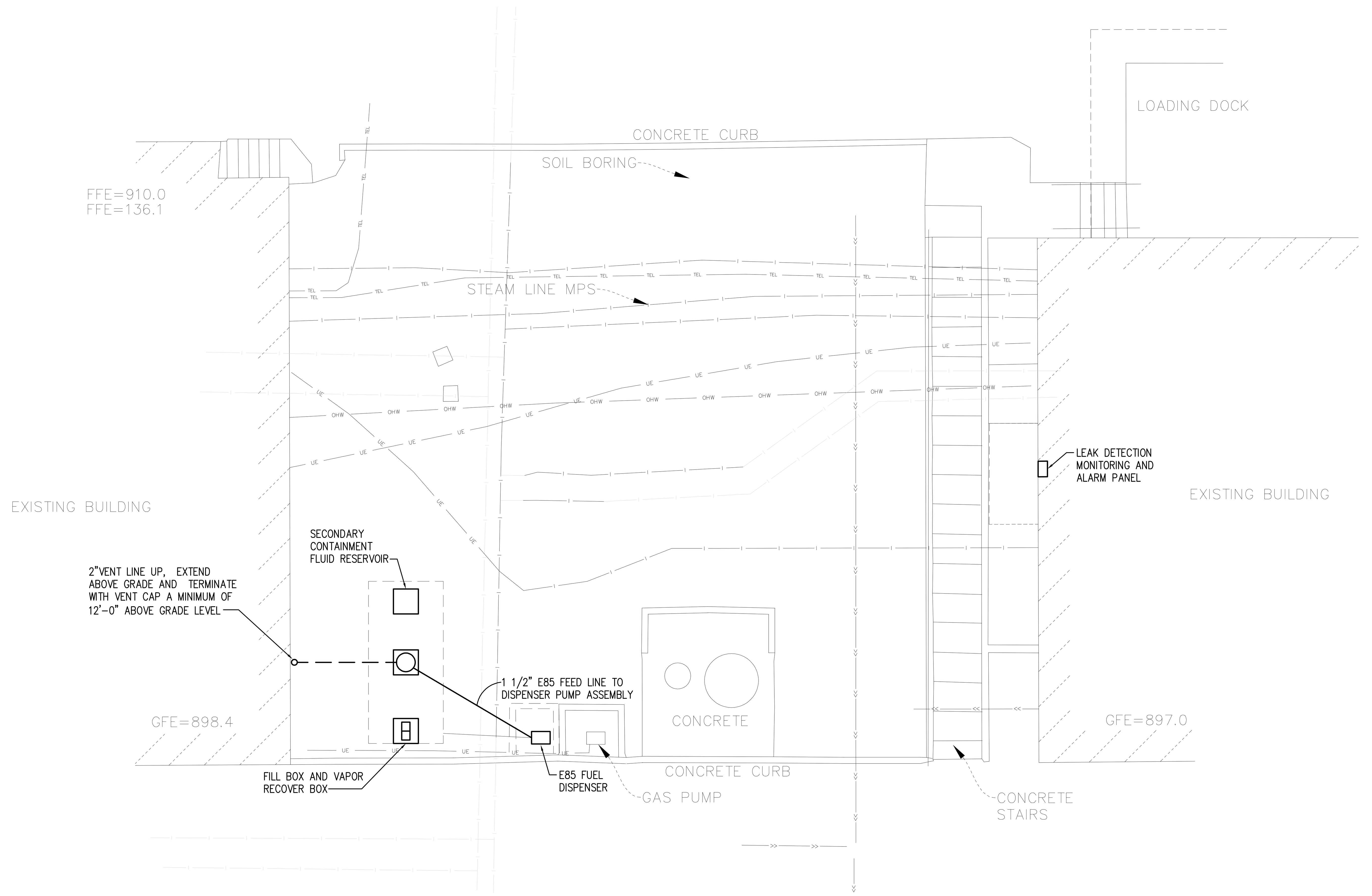
Date: **08/01/2014** | Checked by: **Checker** | Drawn: **Author**

Project Number: **222514**

Building Number:

Drawing number: **CU-101**

Office of Construction and Facilities Management



B1 MECHANICAL SITE PLAN
SCALE: 1:5

GENERAL NOTES:

A. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF UTILITIES IN THE AREA OF EXCAVATION. PROTECT EXISTING UTILITIES FROM DAMAGE THROUGHOUT CONSTRUCTION. IT IS ANTICIPATED THAT EXISTING WATER MAINS WILL BE NO MORE THAN 3 FEET FROM WEST EDGE OF NEW TANK. NOTIFY VA IMMEDIATELY IF LOCATION OF UTILITIES INTERFERES WITH TANK INSTALLATION.
B. ALL EARTHWORK AND SITE PREPARATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT. ALL FOUNDATION EXCAVATIONS SHALL BE OBSERVED AND APPROVED BY THE GEOTECH.
C. ANY EXISTING FILLS OR UNSUITABLE SOILS AS DETERMINED BY THE GEOTECH SHALL BE EXCAVATED AND REPLACED WITH PROPERLY COMPACTED FILL.
D. EXTREME CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS SO AS NOT TO DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC. SHORE EXISTING STRUCTURES AS REQUIRED FOR INSTALLATION OF THE TANK.
E. DO NOT EXCAVATE BELOW THE BEARING ELEVATION OF ANY EXISTING FOOTING ANY CLOSER TO THE FOOTING THAN A SLOPE OF TWO HORIZONTAL (MEASURED FROM EDGE OF FOOTING TO NEAREST POINT IN EXCAVATION) TO ONE VERTICAL.

PUMP EMERGENCY SIGNAGE AND EQUIPMENT:

PROVIDE THE FOLLOWING SIGNAGE AT THE DISPENSING PUMP:
IN CASE OF FIRE OR SPILL:
(1) USE EMERGENCY STOP BUTTON.
(2) REPORT ACCIDENT BY CALLING (SPECIFY LOCAL FIRE NUMBER). REPORT LOCATION.

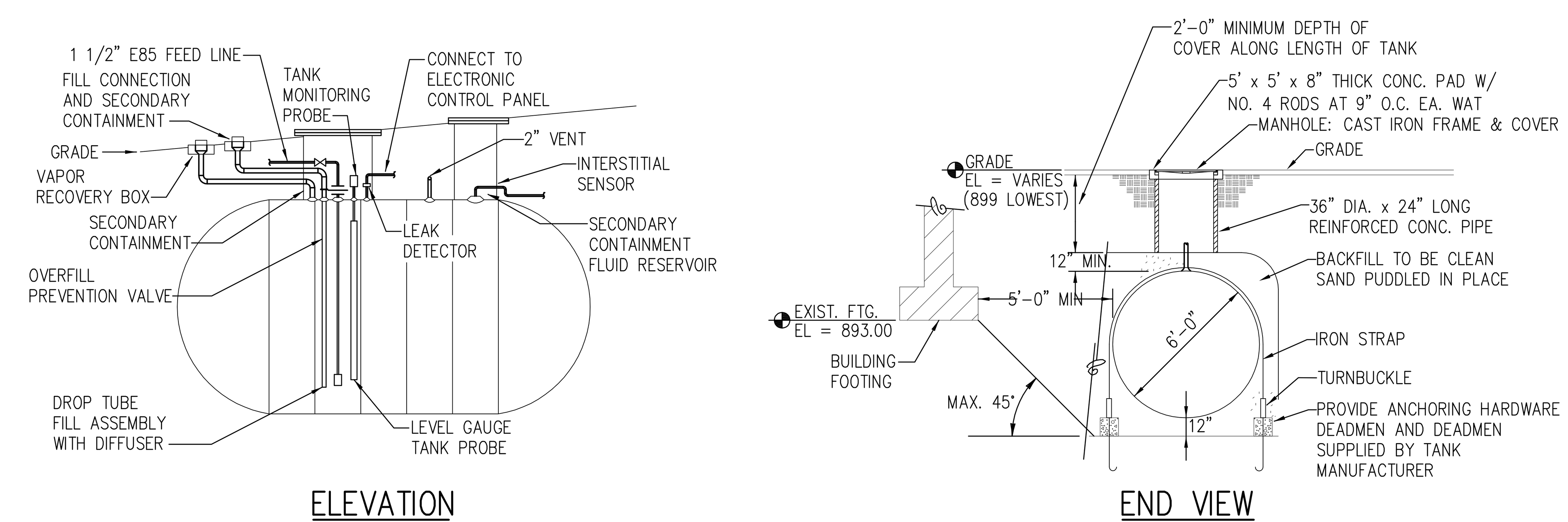
PROVIDE AN EMERGENCY ACCESS PHONE ADJACENT TO THE EMERGENCY STOP BUTTON (EPO). PROVIDE SIGNAGE NEXT TO PHONE INDICATING:
EMERGENCY PHONE FOR USE IN REPORTING SPILLS AND FIRES.
NUMBER TO CALL.
REFER TO ES-101 FOR LOCATION OF EMERGENCY STOP BUTTON (EPO).

UNDERGROUND TANK & BALLAST PAD SCHEDULE

MARK NUMBER	STORED FLUID	TANK CONST MATERIAL	TANK SIZE NOMINAL CAPACITY GAL	TANK SIZE DIA. IN	TANK SIZE LENGTH IN	TANK BUOYANT FORCE LBS	WALL THICKNESS INNER GAUGE	WALL THICKNESS OUTER GAUGE	TANK WEIGHT (DRY) LBS	BALLAST PAD WEIGHT LBS	DEPTH OF COVER IN	HOLD DOWN RODS NUMBER	HOLD DOWN RODS DIA IN	BASIS OF DESIGN	NOTE
UT-1	E85	FIBERGLASS	2500	72	13'-6"		--	--	1700		36	4	NOTE 1	XERXES	

NOTES:
TYP. TANK SIZE DIMENSIONS VARY SLIGHTLY DEPENDING ON MANUFACTURER.
TANK BOUYANT FORCE CALCULATED FOR CLEAN WATER (62.4 LBS/CU. FT).
HOLD DOWN ROD NUMBER AND SIZE BASED ON A 5:1 SAFETY FACTOR FOR TURNBUCKLES.
PROVIDE UNDERWRITERS APPROVED TANKS FOR USE WITH E85 FUEL.

1. PROVIDE HOLD DOWN RODS AND STRAPS PER MANUFACTURER RECOMMENDED STANDARDS.
2 CONTRACTOR TO PROVIDE TANK FULL OF E85 FUEL AT END OF PROJECT.



A4 GASOLINE STORAGE TANK DETAIL
SCALE: NTS

CONSTRUCTION BID DOCUMENTS

NO	REVISIONS	DATE

PROJECT TEAM

ARCHITECTURAL: MECHANICAL/ELECTRICAL/PLUMBING: STRUCTURAL: CIVIL / SURVEYOR: FIRE PROTECTION: COMMISSIONING AGENCY: ENVIRONMENTAL SERVICES:

ARCHITECTS/ENGINEERS

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Drawing Title: MECHANICAL PLAN, DETAILS AND SCHEDULE
Approved : Project Director

Project Title: E85 FUEL STATION
Location: 3600 30TH STREET DES MOINES, IA 50310
Date: 08/1/2014 | Checked by: Checker | Drawn: H. Phillips

Project Number: 222514
Building Number:
Drawing number: MS-101

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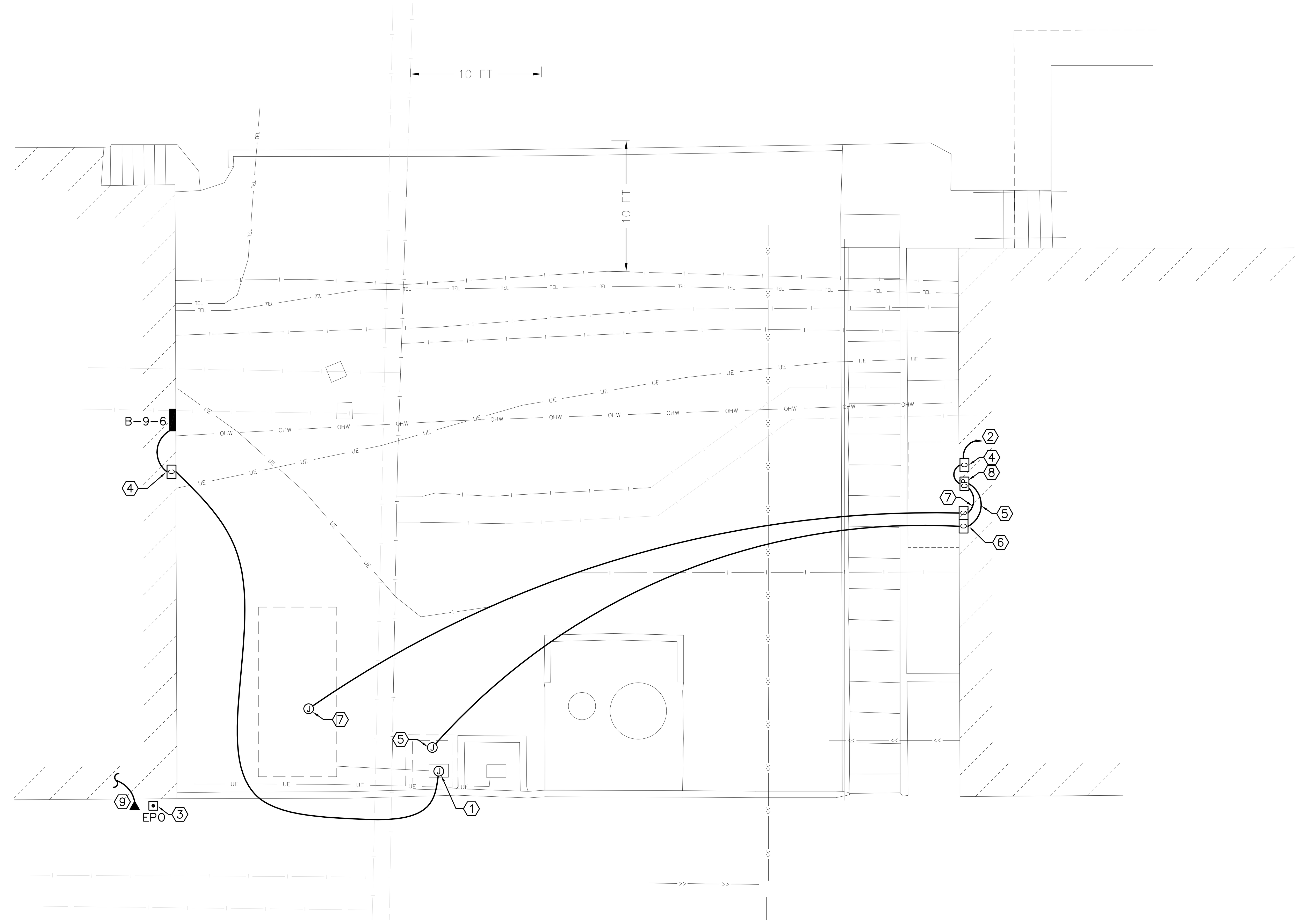

B1 ELECTRICAL SITE PLAN
SCALE: 1:5

GENERAL NOTES:

A. ALL EXTERIOR CONDUIT SHALL BE THREADED RIGID METAL CONDUIT OR THREADED STEEL INTERMEDIATE METAL CONDUIT. ALL INTERIOR CONDUIT MAY BE EMT.
B. RIGID NONMETALLIC CONDUIT SHALL BE ALLOWED FOR UNDERGROUND RUNS IN ACCORDANCE WITH NEC 514.8 EXCEPTION 2.
C. PROVIDE GROUNDING AND BONDING OF ALL CIRCUITS AND CONDUIT RUNS IN ACCORDANCE WITH NEC 514.16
D. PROVIDE EXPLOSION SEAL FOR ALL CONDUITS WITHIN 3 FT OF THE POINT OF EMERGENCE ABOVE GRADE.
E. CONFIRM LOCATION OF ALL EQUIPMENT WITH OWNER PRIOR TO INSTALLATION.

KEYED NOTES:

1. PROVIDE CONNECTION TO FUEL DISPENSER. ROUTE (2)#12, (1)#12 GRD CIRCUIT TO NEW 20/1 CIRCUIT BREAKER IN EXISTING PANEL B-9-6. BREAKER TO MATCH EXISTING. CONDUIT SHALL ENTER BUILDING ABOVE GRADE. CIRCUIT SHALL BE ROUTED THROUGH CONTACTOR.
2. PROVIDE POWER CONNECTION FOR TANK MONITORING AND DISPENSER MONITORING. ROUTE (2)#12, (1)#12 GRD CIRCUIT TO NEW 20/1 CIRCUIT BREAKER IN EXISTING PANEL SERVING AREA. BREAKER TO MATCH EXISTING. CIRCUIT SHALL BE ROUTED THROUGH CONTACTOR.
3. PROVIDE EXTERIOR RATED EPO. EPO TO OPEN CONTACTORS FOR POWER AND COMMUNICATION SIMULTANEOUSLY. PROVIDE SIGN NOTING "GASOLINE PUMP EMERGENCY SHUT OFF SWITCH". SIGNAGE SHALL CONSIST OF WHITE TEXT ENGRAVED ON RED BACKGROUND. TEXT SHALL BE ARIAL FONT 1-1/2" IN HEIGHT. CONTRACTOR SHALL SUBMIT SIGNAGE TEMPLATE FOR APPROVAL PRIOR TO FABRICATION.
4. PROVIDE TWO 20A, 120V, 3-POLE CONTACTORS IN AN ENCLOSURE. ENCLOSURE SHALL BE SIZED TO ALLOW FOR A SECOND SET OF CONTACTORS TO BE ADDED IN THE FUTURE. POWER WIRING SHALL BE ROUTED THROUGH CONTACTORS OPENING HOT, NEUTRAL, AND GROUND.
5. ROUTE 1" CONDUIT FROM FUEL OIL CONTROL PANEL THROUGH COMMUNICATION-RATED CONTACTOR TO FUEL DISPENSER FOR COMMUNICATION WIRING.
6. PROVIDE TWO LOW VOLTAGE, COMMUNICATION RATED, 4-POLE, CONTACTORS IN AN ENCLOSURE. ENCLOSURE SHALL BE SIZED TO ALLOW FOR A SECOND SET OF CONTACTORS TO BE ADDED IN THE FUTURE.
7. ROUTE 1" CONDUIT FROM FUEL OIL CONTROL PANEL THROUGH COMMUNICATION-RATED CONTACTOR TO UNDERGROUND STORAGE TANK FOR COMMUNICATION WIRING.
8. FUEL OIL CONTROL PANEL PROVIDED BY MECHANICAL.
9. PROVIDE CONNECTION FOR EMERGENCY PHONE. PHONE SHALL BE USED FOR COMMUNICATION IN EVENT OF EMERGENCY FUEL SYSTEM SHUTDOWN. ROUTE CONDUIT BACK TO NEAREST COMMUNICATIONS CLOSET FOR CONNECTION TO EXISTING TELECOMMUNICATION SYSTEM.

CONSTRUCTION BID DOCUMENTS

NO	REVISIONS	DATE

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Drawing Title	ELECTRICAL SITE PLAN
Approved : Project Director	
Project Title	E85 FUEL STATION
Location	3600 30TH STREET DES MOINES, IA 50310
Date	08/1/2014
Checked by	Checker
Drawn	H. Phillips
Project Number	222514
Building Number	
Drawing number	ES-101

Office of Construction and Facilities Management

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